

REMARKS

I. Paragraph 1

Claim 1 has been amended to delete the "preferable" ranges. The minimum values for the ranges of claim 1 have been carried over to claims 2-4. Accordingly, claims 2-4 now constitute proper dependent claims because they further limit claim 1. Similarly, minimum values for ranges of claim 5 have been carried over to claims 10-12.

The amendment addresses this rejection and the rejection should be withdrawn in view of the amendment.

II. Paragraph 2

The claims have been amended to specify that the percentages are by weight, and the suggested claim language regarding optional boron has been adopted. The suggestion is appreciated.

The amendment addresses this rejection and the rejection should be withdrawn in view of the amendment.

III. Paragraphs 3-5

The "preferable" language has been deleted from claim 1.

The amendment addresses this rejection and the rejection should be withdrawn in view of the amendment.

IV. Paragraphs 6-7 rejecting claims 1-4 and 7-9 as anticipated by Diamond US 5,348,089

A. The invention

Claim 1 specifies a 22k gold composition with specified amounts of silver, cobalt and copper.

B. The rejection

The rejection is based on the following analysis: Diamond anticipates claim 1 because, "The ranges of composition disclosed by Diamond overlap the presently claimed ranges."

It is clear that the specific examples in Diamond do not come close to any of several basic values required in claim 1 as detailed below. Therefore, none of the specific examples of alloys described by Diamond meets all of the requirements of claims 1, and none provides a proper legal basis for anticipation. Moreover, it appears that the Examiner recognizes that Diamond's specific examples do not anticipate claim because the rejection does not rely on the specific examples at all.

Instead, the rejection relies on the general ranges of alloy elements disclosed in Diamond. From these ranges, the Examiner arbitrarily constructs an example of an alloy that meets all the claim limitations but that is not disclosed in the reference.

Before analyzing the facts in greater detail, we need to discuss the proper standard to be applied to those facts where, as here, the specific examples in the reference do not anticipate the claims, but the reference includes broader ranges that overlap in some way with the claims. The rejection assumes that overlap by itself constitutes anticipation.

C. The proper standard

The standard the rejection relies on to support anticipation is legally incorrect. A prior reference that discloses ranges overlapping a later reference does NOT automatically anticipate the later reference. The MPEP provides the analytical framework for evaluating the art in this situation (see MPEP §2131.03, emphasis added):

When the prior art discloses a range which touches, overlaps or is within the claimed range, but no specific examples falling within the claimed range are disclosed, a case by case determination must be made as to anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute". Emphasis is added.

The case-by-case determination involves a judgment about whether the reference teaches a broad range while the claims are directed to a narrow range. If so, there is no anticipation. The case law provides guidance in this evaluation.

For example, there is guidance in the opinion from the Court of Appeals for the Federal Circuit in Minnesota Mining and Manufacturing Co. v. Johnson & Johnson Orthopedics, 24 U.S.P.Q.2d 1321 (1992) ("*3M v. J&J*"). The claim at issue in *3M v. J&J* required a fiberglass fabric having a thickness of 0.020 to 0.45 inch and a mesh size of 20 to 200 openings per square inch. These parameters provided beneficial properties to casts made from the fiberglass fabric. Id. at 1325-26, 1332. The prior art reference ["Straube"] mentioned fiberglass but did not discuss thickness and mesh size. Id. at 1332. However, for purposes of our review of the court's decision, we assume that a thickness range of .0003 to 0.03 inch and a mesh size of 25 to 2500 openings per square inch can be extrapolated from the prior art reference. The Federal Circuit found that the prior art reference was not an anticipation (24 U.S.P.Q.2d at 1332; emphasis added):

The ... ranges ... extrapolated from Straube [the prior art reference] are "so broad as to be meaningless to one skilled in the art." The Straube patent provides no guidance as to how to construct a fiberglass cast with the beneficial properties achieved by the [patented] invention; strength, porosity, lightness, and ability to cure quickly. ...[A]lthough [the patent] claims are subsumed in Straube's generalized disclosure of knit fiberglass as a substrate, this is not literal identity.

* * *

In order to anticipate, the Straube patent must sufficiently describe the claimed invention to have placed the public in possession of it. The record establishes that the Straube patent does not do this. Emphasis is added.

The Federal Circuit and the MPEP are very clear that, in the situation we have here, one must review the breadth of the ranges in the prior art and compare that breadth to the breadth of the claimed range.

D. Applying the standard

Below we compare the broad Diamond ranges with the claims in the table below.

Element	Claim 1	Diamond
Gold	22k (91.67%)	8-22 k (33.3-91.6%)
Silver	2.0-6.0%	2.0-22%
Cobalt	0.1-2.0%	0-2.0%
Copper	0.33-8.4%	2.0-47.3%
Boron	0-0.5%	0%

From the table it is clear that one skilled in the art would have to make several selections from the disclosure in Diamond to arrive at an alloy within the limits of claim 1. First, one would have to select the top of Diamond's gold range. Second, one would have to select the bottom of Diamond's copper range. Third, one would have to select the bottom of Diamond's silver range. So the examiner has made not one but three specific selections, picking and choosing from the general description of weight ranges in Diamond to create an alloy that falls within the claims. The problem is, the alloy the examiner constructs is one that Diamond does not disclose. In *3M v. J&J*, the percentage overlap of the prior art range and the range required by the claim was not trivial $[(9200-20)/(2500-25) = \text{over } 7\%]$. Note by way of comparison that the claims in this case are limited to one particular gold value. Moreover, in this case, there are selections to be made for each of three ranges detailed above. To find anticipation, the examiner must conclude that each range is anticipated, cumulatively. Furthermore, like in *3M v. J&J*, the prior art relied upon here by the Examiner provides absolutely no guidance concerning how to make a product having the beneficial properties achieved when operating within the ranges required by the claim.

Thus, applying the standards provided in the MPEP and in the case law, Diamond does not anticipate claim 1. As a result, the 35 U.S.C. §102 rejection based on Diamond should be withdrawn as to claim 1. Claims 2-4 and 7-8 depend from claim 1 and those dependent claims are not anticipated for the same reason that claim 1 is not anticipated.

V. Paragraphs 8-9, obviousness of the master alloy claims 5, 6 and 9-12.

A claimed invention cannot be found obvious unless something in the prior art suggests the invention to a person of ordinary skill in the art. Ex parte Clapp, 227 U.S.P.Q. 972, 973 (Bd. App. 1985). The Examiner is required in the first instance to provide a factual (not speculative) basis for an obviousness rejection. As the Court in In re Warner, 154 U.S.P.Q. 173, 179 (C.C.P.A. 1967) explained:

A rejection based on section 103 clearly must rest on a factual basis, and these facts must be interpreted without hindsight reconstruction of the invention from the prior art. In making this evaluation, all facts must be considered. The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not, because it may doubt that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis.

The issues in this case are: a) whether the underlying alloy of claim 1 is obvious, and, if so, b) whether it would then have been obvious to use a master alloy featured in claim 5 to make the alloy of claim 1. The rejection concludes that the answer to b) is yes, but it does not deal with a). For the reasons given above, claim 1 is not anticipated. Therefore, the obviousness question for claim 5 comes down to one issue: would it have been obvious to make the alloy of claim 1. As detailed in the specification, the inventor has realized that it is possible to make a 22 karat gold alloy that has sufficient hardness for jewelry applications without sacrificing desirable color characteristics. Specifically, traditional 22-karat gold jewelry must be relatively thick due to its softness. Substances that harden 22 karat gold may impart undesirable color. The invention permits the use of standard machine fabrication techniques, such as stamping, wire drawing and threading, on 22karat material while maintaining desirable color. Note that the rationale behind the invention and the claims are specific to 22-karat jewelry. Even an alloy within the scope of claim 1 were theoretically possible from the disclosure in Diamond (simply because it is within the broad scope disclosed in Diamond), nothing in the cited art provides any motivation or suggestion to produce such an alloy. Certainly nothing in Diamond hints at the Applicant's discovery of a solution to the problem of how to make 22 karat gold harder and feasible in machine fabrication techniques without undesirable discoloration.

For all of the above reasons, the 35 U.S.C. §103(a) rejection of claims 5, 6 and 9-12 should be reversed.

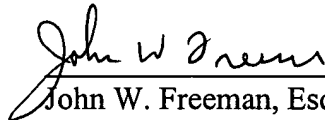
Applicant : Arthur D. Taylor
Serial No. : 09/943,987
Filed : August 31, 2001
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Applicant asks that all claims be allowed. Enclosed is a \$930.00 check for the Petition for Extension of Time fee. Please apply any other charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 1/23/03



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Version with markings to show changes made

Claims 1, 2, 3, 4, 5, 10, 11 and 12 have been amended as follows:

1. A 22K gold alloy comprising, by weight:

silver: 2 –6% [(and preferably 2-5%)]
cobalt: 0.1 to 2% [(and preferably 0.1 – 1%)]
optionally boron [(optional)] up to 0.5%
copper: 0.33% - 8.40%.
2. The composition of claim 1 in which the silver content is [less than] 2-5%, by weight.
3. The composition of claim 1 in which the cobalt content is [less than 2%] 0.1–1%, by weight.
4. The composition of claim 2 in which the cobalt content is [less than 2%] 0.1–1%, by weight.
5. A master alloy for combining with gold, comprising, by weight:

silver: 32 –96%
cobalt: 1.6-32.00%
optionally boron [(optional)] up to 8%
copper: [:] 5.28 – 66.40%.
10. The alloy of claim 5 in which the silver content is [less than] 32-80%, by weight.

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11. The alloy of claim 5 in which cobalt is [less than] 1.6-16.00%, by weight.
12. The alloy of claim 10 in which cobalt is [less than] 1.6-16.00%, by weight.